What Is Claimed Is:

1. A process for producing an aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin which comprises reacting:

A) from about 65.0% to about 99.5% by total weight of the reactants of a first component comprising:

1) from about 50.0% to about 100.0% by weight of the first component of at least one cyclopentadienyl compound selected from the group consisting cyclopentadiene, dicyclopentadiene, methylcyclopentadienes, dimers of methylcyclopentadienes, cross-dimers of cyclopentadiene and methylcyclopentadienes, and combinations thereof, and

2) up to about 50.0% by weight of the first component of at least one additive selected from the group consisting of non-cyclopentadienyl olefinic monomers, acrylic monomers, α,β-unsaturated carboxylic acids, α,β-unsaturated anhydrides, fatty acids, rosins, and combinations thereof, and

B) from about 0.5% to about 35.0% by total weight of the reactants of a second component comprising at least one aromatic carboxylic acid,

at a temperature in the range of about 240°C to about 290°C for a time sufficient to produce the aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin.

2. The process of claim 1 which further comprises reacting:

A) from about 90.0% to about 99.0% by total weight of the reactants of a first component comprising:

1) from about 50.0% to about 100.0% by weight of the first component of at least one cyclopentadienyl compound selected from the group consisting cyclopentadiene, dicyclopentadiene, methylcyclopentadienes, dimers of methylcyclopentadienes, cross-dimers of cyclopentadiene and methylcyclopentadienes, and combinations thereof, and

2) up to about 50.0% by weight of the first component of at least one additive selected from the group consisting of non-cyclopentadienyl olefinic monomers, acrylic monomers, α,β-unsaturated carboxylic acids, α,β-unsaturated anhydrides, fatty acids, rosins, and combinations thereof, and

B) from about 1.0% to about 10.0% by total weight of the reactants of a second component comprising at least one aromatic carboxylic acid,

at a temperature in the range of about 240°C to about 290°C for a time sufficient to produce the aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resins.

3. The process of claim 1 wherein the cyclopentadienyl compound is at least one hydrocarbon feedstock stream.

4. The process of claim 1 wherein the additive is a member selected from the group consisting of C-9 streams containing styrene, C-9 streams containing substituted styrene, fumaric acid, maleic acid, maleic anhydride, saturated monocarboxylic acids containing from about 8 to about 24 carbon atoms, unsaturated monocarboxylic acids containing from about 8 to about 24 carbon atoms, unsaturated aliphatic monocarboxylic acids derived from tall oil, unsaturated aliphatic monocarboxylic acids derived from vegetable oil, tall oil rosin, gum rosin, wood rosin, and combinations thereof.

5. The process of claim 1 wherein the reaction temperature is in the range of about 245°C to about 285°C.

6. The process of claim 1 wherein the aromatic carboxylic acid is a compound containing a total of from one to about three carbocyclic and/or heterocyclic aromatic rings to which are attached a total of from one to about four carboxyl groups.

7. The process of claim 1 wherein the aromatic carboxylic acid is a member selected from the group consisting of benzoic acid, alkyl-substituted benzoic acids, alkoxy-substituted benzoic acids, halogenated benzoic acids, heterocyclic acids, and combinations thereof.

8. The process of claim 7 wherein the aromatic carboxylic acid is a member selected from the group consisting of o-toluic acid, m-toluic acid, p-toluic acid, p-tert-butylbenzoic acid, p-anisic acid, 4-octyloxybenzoic acid, m-chlorobenzoic acid, phthalic acid, isophthalic acid, terephthalic acid, 1-naphthoic acid, 2-naphthoic acid, trimellitic acid, pyromellitic acid, benzophenonetetracarboxylic acid, picolinic acid, nicotinic acid, and combinations thereof.

9. The aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin produced by the process of claim 1.

10. A varnish comprising the aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin of claim 9 and at least one hydrocarbon solvent.

11. An ink comprising the varnish of claim 10 and at least one pigment.

12. A process for producing an aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin which comprises reacting:

A) from about 65.0% to about 99.5% by total weight of the reactants of a first component comprising:

1) from about 50.0% to about 99.0% by weight of the first component of at least one cyclopentadienyl compound selected from the group consisting cyclopentadiene, dicyclopentadiene, methylcyclopentadienes, dimers of methylcyclopentadienes, cross-dimers of cyclopentadiene and methylcyclopentadienes, and combinations thereof,

2) up to about 50.0% by weight of the first component of at least one additive selected from the group consisting of non-cyclopentadienyl olefinic monomers, acrylic monomers, α,β-unsaturated carboxylic acids, α,β-unsaturated anhydrides, fatty acids, rosins, and combinations thereof,

3) from about 1.0% to about 50.0% by weight of the first component of at least one alkylphenol, and

4) a catalytic amount of at least one acid catalyst, and

B) from about 0.5% to about 35.0% by total weight of the reactants of a second component comprising at least one aromatic carboxylic acid,

at a temperature in the range of about 240°C to about 290°C for a time sufficient to produce the aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin.

13. The process of claim 12 which further comprises reacting:

A) from about 90.0% to about 99.0% by total weight of the reactants of a first component comprising:

1) from about 50.0% to about 98.0% by weight of the first component of at least one cyclopentadienyl compound selected from the group consisting cyclopentadiene, dicyclopentadiene, methylcyclopentadienes, dimers of methylcyclopentadienes, cross-dimers of cyclopentadiene and methylcyclopentadienes, and combinations thereof,

2) up to about 50.0% by weight of the first component of at least one additive selected from the group consisting of non-cyclopentadienyl olefinic monomers, acrylic monomers, α,β-unsaturated carboxylic acids, α,β-unsaturated anhydrides, fatty acids, rosins, and combinations thereof,

3) from about 1.0% to about 50.0% by weight of the first component of at least one alkylphenol, and

4) a catalytic amount of at least one acid catalyst, and

B) from about 1.0% to about 10.0% by total weight of the reactants of a second component comprising at least one aromatic carboxylic acid,

at a temperature in the range of about 240°C to about 290°C for a time sufficient to produce the aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resins.

14. The process of claim 12 wherein the cyclopentadienyl compound is at least one hydrocarbon feedstock stream.

15. The process of claim 12 wherein the additive is a member selected from the group consisting of C-9 streams containing styrene, C-9 streams containing substituted styrene, fumaric acid, maleic acid, maleic anhydride, saturated monocarboxylic acids containing from about 8 to about 24 carbon atoms, unsaturated monocarboxylic acids containing from about 8 to about 24 carbon atoms, unsaturated aliphatic monocarboxylic acids derived from tall oil, unsaturated aliphatic monocarboxylic acids derived from vegetable oil, tall oil rosin, gum rosin, wood rosin, and combinations thereof.

16. The process of claim 12 wherein the alkylphenol is a member selected from the group consisting of p-tert-butylphenol, p-tert-amylphenol, p-tert-octylphenol, nonylphenol, dodecylphenol, dinonylphenol, p-cumylphenol, bisphenol A, and combinations thereof.

17. The process of claim 12 wherein the acid catalyst is a member selected from the group consisting of mineral acids, sulfonic acids, and combinations thereof.

18. The process of claim 17 wherein the acid catalyst is a member selected from the group consisting of sulfuric acid, phosphoric acid, hydrochloric acid, methanesulfonic acid, toluenesulfonic acid, and combinations thereof.

19. The process of claim 12 wherein the reaction temperature is in the range of about 245°C to about 285°C.

20. The process of claim 12 wherein the aromatic carboxylic acid is a compound containing a total of from one to about three carbocyclic and/or heterocyclic aromatic rings to which are attached a total of from one to about four carboxyl groups.

21. The process of claim 12 wherein the aromatic carboxylic acid is a member selected from the group consisting of benzoic acid, alkyl-substituted benzoic acids, alkoxy-substituted benzoic acids, halogenated benzoic acids, heterocyclic acids, and combinations thereof.

22. The process of claim 21 wherein the aromatic carboxylic acid is a member selected from the group consisting of o-toluic acid, m-toluic acid, p-toluic acid, p-tert-butylbenzoic acid, p-anisic acid, 4-octyloxybenzoic acid, m-chlorobenzoic acid, phthalic acid, isophthalic acid, terephthalic acid, 1-naphthoic acid, 2-naphthoic acid, trimellitic acid, pyromellitic acid, benzophenonetetracarboxylic acid, picolinic acid, nicotinic acid, and combinations thereof.

23. The aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin produced by the process of claim 12.

24. A varnish comprising the aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin of claim 23 and at least one hydrocarbon solvent.

25. An ink comprising the varnish of claim 24 and at least one pigment.

26. A two-step process for producing an aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin which comprises:

A) reacting in a first step:

1) from about 50.0% to about 100.0% by weight of the first step reactants of at least one cyclopentadienyl compound selected from the group consisting cyclopentadiene, dicyclopentadiene, methylcyclopentadienes, dimers of methylcyclopentadienes, cross-dimers of cyclopentadiene and methylcyclopentadienes, and combinations thereof, and

2) up to about 50.0% by weight of the first step reactants of at least one additive selected from the group consisting of non-cyclopentadienyl olefinic monomers, acrylic monomers, α,β-unsaturated carboxylic acids, α,β-unsaturated anhydrides, fatty acids, rosins, and combinations thereof, and

at a temperature in the range of about 240°C to about 290°C for a time sufficient to produce a hydrocarbon resin, and

B) reacting in a second step:

1) from about 65.0% to about 99.5% by total weight of the second step reactants of the hydrocarbon resin of step one, and

2) from about 0.5% to about 35.0% by total weight of the second step reactants of at least one aromatic carboxylic acid,

at a temperature in the range of about 200°C to about 275°C for a time sufficient to produce the aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin.

27. The process of claim 26 which further comprises:

A) reacting in a first step:

1) from about 50.0% to about 100.0% by weight of the first step reactants of at least one cyclopentadienyl compound selected from the group consisting cyclopentadiene, dicyclopentadiene, methylcyclopentadienes, dimers of methylcyclopentadienes, cross-dimers of cyclopentadiene and methylcyclopentadienes, and combinations thereof, and

2) up to about 50.0% by weight of the first step reactants of at least one additive elected from the group consisting of non-cyclopentadienyl olefinic monomers, acrylic monomers, α,β-unsaturated carboxylic acids, α,β-unsaturated anhydrides, fatty acids, rosins, and combinations thereof, and

at a temperature in the range of about 240°C to about 290°C for a time sufficient to produce a hydrocarbon resin, and

B) reacting in a second step:

1) from about 90.0% to about 99.0% by total weight of the second step reactants of the hydrocarbon resin of step one, and

2) from about 1.0% to about 10.0% by total weight of the second step reactants of at least one aromatic carboxylic acid,

at a temperature in the range of about 200°C to about 275°C for a time sufficient to produce the aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin.

28. The process of claim 26 wherein the cyclopentadienyl compound is at least one hydrocarbon feedstock stream.

29. The process of claim 26 wherein the additive is a member selected from the group consisting of C-9 streams containing styrene, C-9 streams containing substituted styrene, fumaric acid, maleic acid, maleic anhydride, saturated monocarboxylic acids containing from about 8 to about 24 carbon atoms, unsaturated monocarboxylic acids containing from about 8 to about 24 carbon atoms, unsaturated aliphatic monocarboxylic acids derived from tall oil, unsaturated aliphatic monocarboxylic acids derived from vegetable oil, tall oil rosin, gum rosin, wood rosin, and combinations thereof.

30. The process of claim 26 wherein the first step reaction temperature is in the range of about 245°C to about 285°C.

31. The process of claim 26 wherein the second step reaction temperature is in the range of about 210°C to about 265°C.

32. The process of claim 26 wherein the aromatic carboxylic acid is a compound containing a total of from one to about three carbocyclic and/or heterocyclic aromatic rings to which are attached a total of from one to about four carboxyl groups.

33. The process of claim 26 wherein the aromatic carboxylic acid is a member selected from the group consisting of benzoic acid, alkyl-substituted benzoic acids, alkoxy-substituted benzoic acids, halogenated benzoic acids, heterocyclic acids, and combinations thereof.

34. The process of claim 33 wherein the aromatic carboxylic acid is a member selected from the group consisting of o-toluic acid, m-toluic acid, p-toluic acid, p-tert-butylbenzoic acid, p-anisic acid, 4-octyloxybenzoic acid, m-chlorobenzoic acid, phthalic acid, isophthalic acid, terephthalic acid, 1-naphthoic acid, 2-naphthoic acid, trimellitic acid, pyromellitic acid, benzophenonetetracarboxylic acid, picolinic acid, nicotinic acid, and combinations thereof.

35. The aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin produced by the process of claim 26.

36. A varnish comprising the aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin of claim 35 and at least one hydrocarbon solvent.

37. An ink comprising the varnish of claim 36 and at least one pigment.

38. A two-step process for producing an aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin which comprises:

A) reacting in a first step:

1) from about 50.0% to about 99.0% by weight of the first step reactants of at least one cyclopentadienyl compound selected from the group consisting cyclopentadiene, dicyclopentadiene, methylcyclopentadienes, dimers of methylcyclopentadienes, cross-dimers of cyclopentadiene and methylcyclopentadienes, and combinations thereof, and

2) up to about 50.0% by weight of the first step reactants of at least one additive selected from the group consisting of non-cyclopentadienyl olefinic monomers, acrylic monomers, α,β-unsaturated carboxylic acids, α,β-unsaturated anhydrides, fatty acids, rosins, and combinations thereof,

3) from about 1.0% to about 50.0% by weight of the first step reactants of at least one alkylphenol, and

4) a catalytic amount of at least one acid catalyst,

at a temperature in the range of about 240°C to about 290°C for a time sufficient to produce a hydrocarbon resin, and

B) reacting in a second step:

1) from about 65.0% to about 99.5% by total weight of the second step reactants of the hydrocarbon resin of step one, and

2) from about 0.5% to about 35.0% by total weight of the second step reactants of at least one aromatic carboxylic acid,

at a temperature in the range of about 200°C to about 275°C for a time sufficient to produce the aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin.

39. The process of claim 38 which further comprises:

A) reacting in a first step:

1) from about 50.0% to about 98.0% by weight of the first step reactants of at least one cyclopentadienyl compound selected from the group consisting cyclopentadiene, dicyclopentadiene, methylcyclopentadienes, dimers of methylcyclopentadienes, cross-dimers of cyclopentadiene and methylcyclopentadienes, and combinations thereof, and

2) up to about 50.0% by weight of the first step reactants of at least one additive selected from the group consisting of non-cyclopentadienyl olefinic monomers, acrylic monomers, α,β-unsaturated carboxylic acids, α,β-unsaturated anhydrides, fatty acids, rosins, and combinations thereof,

3) from about 1.0% to about 50.0% by weight of the first step reactants of at least one alkylphenol, and

4) a catalytic amount of at least one acid catalyst,

at a temperature in the range of about 240°C to about 290°C for a time sufficient to produce a hydrocarbon resin, and

B) reacting in a second step:

1) from about 90.0% to about 99.0% by total weight of the second step reactants of the hydrocarbon resin of step one, and

2) from about 1.0% to about 10.0% by total weight of the second step reactants of at least one aromatic carboxylic acid,

at a temperature in the range of about 200°C to about 275°C for a time sufficient to produce the aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin.

40. The process of claim 38 wherein the cyclopentadienyl compound is at least one hydrocarbon feedstock stream.

41. The process of claim 38 wherein the additive is a member selected from the group consisting of C-9 streams containing styrene, C-9 streams containing substituted styrene, fumaric acid, maleic acid, maleic anhydride, saturated monocarboxylic acids containing from about 8 to about 24 carbon atoms, unsaturated monocarboxylic acids containing from about 8 to about 24 carbon atoms, unsaturated aliphatic monocarboxylic acids derived from tall oil, unsaturated aliphatic monocarboxylic acids derived from vegetable oil, tall oil rosin, gum rosin, wood rosin, and combinations thereof.

42. The process of claim 38 wherein the alkylphenol is a member selected from the group consisting of p-tert-butylphenol, p-tert-amylphenol, p-tert-octylphenol, nonylphenol, dodecylphenol, dinonylphenol, p-cumylphenol, bisphenol A, and combinations thereof.

43. The process of claim 38 wherein the acid catalyst is a member selected from the group consisting of mineral acids, sulfonic acids, and combinations thereof.

44. The process of claim 43 wherein the acid catalyst is a member selected from the group consisting of sulfuric acid, phosphoric acid, hydrochloric acid, methanesulfonic acid, toluenesulfonic acid, and combinations thereof.

45. The process of claim 38 wherein the first step reaction temperature is in the range of about 245°C to about 285°C.

46. The process of claim 38 wherein the second step reaction temperature is in the range of about 210°C to about 265°C.

47. The process of claim 38 wherein the aromatic carboxylic acid is a compound containing a total of from one to about three carbocyclic and/or heterocyclic aromatic rings to which are attached a total of from one to about four carboxyl groups.

48. The process of claim 38 wherein the aromatic carboxylic acid is a member selected from the group consisting of benzoic acid, alkyl-substituted benzoic acids, alkoxy-substituted benzoic acids, halogenated benzoic acids, heterocyclic acids, and combinations thereof.

49. The process of claim 48 wherein the aromatic carboxylic acid is a member selected from the group consisting of o-toluic acid, m-toluic acid, p-toluic acid, p-tert-butylbenzoic acid, p-anisic acid, 4-octyloxybenzoic acid, m-chlorobenzoic acid, phthalic acid, isophthalic acid, terephthalic acid, 1-naphthoic acid, 2-naphthoic acid, trimellitic acid, pyromellitic acid, benzophenonetetracarboxylic acid, picolinic acid, nicotinic acid, and combinations thereof.

50. The aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin of the process of claim 38.

51. A varnish comprising the aromatic carboxylic acid-modified, cyclopentadiene-based hydrocarbon resin of claim 50 and at least one hydrocarbon solvent.

52. An ink comprising the varnish of claim 51 and at least one pigment.